

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A multiport amplifying apparatus comprising:

an input hybrid network having a plurality of input ports;

a plurality of amplifiers connected to the output of said input hybrid network; ~~and~~

an output hybrid network connected to the outputs of said amplifiers and having a plurality of output ports; and

a digital frequency converter disposed in front of said input hybrid network,

wherein said input hybrid network receives digital quadrature baseband signals from said plurality of input ports, and evenly distributes the input digital quadrature baseband signals to said plurality of amplifiers.
2. (Currently Amended) The multiport amplifying apparatus according to claim 1, wherein:

said input hybrid network comprises:

 2^n of said input ports (where n is a natural number); and

 $2^{(n-1)} \times n$ hybrid circuits,

wherein each of said hybrid circuits is a digital hybrid circuit for processing a digital quadrature baseband signal.

3. (Original) The multiport amplifying apparatus according to claim 2, wherein said digital hybrid circuit is a digital quadrature baseband hybrid circuit comprising:

an adder for adding incoming digital quadrature baseband signals; and

a subtractor for subtracting one digital quadrature baseband signal from another.

4. (Currently Amended) The multiport amplifying apparatus according to claim 1, wherein:

said output hybrid network comprises:

2^n of said output ports (where n is a natural number); and

$2^{(n-1)} \times n$ output hybrid circuits,

wherein each of said output hybrid circuits is an analog hybrid circuit for processing an analog RF-band signal.

5. (Original) The multiport amplifying apparatus according to claim 1, wherein:

each of said amplifiers is a digital quadrature baseband signal input type amplifier for amplifying a digital quadrature baseband signal received from said input hybrid network and delivering an analog RF-band signal.

6. (Original) The multiport amplifying apparatus according to claim 1, further comprising a converter circuit disposed behind said input hybrid network for converting a digital quadrature baseband signal to an analog RF-band signal, said converter circuit including:

a digital-to-analog converter for converting the digital quadrature baseband signal to an analog quadrature baseband signal;

a filter for filtering out an aliasing component produced by sampling, said aliasing component being included in said analog quadrature baseband signal; and

a quadrature modulator for orthogonally modulating the analog quadrature baseband signal from which the aliasing component has been removed,

wherein each of said amplifiers is an analog RF input type amplifier for amplifying the analog RF-band signal delivered from said converter circuit.

7. (Original) The multiport amplifying apparatus according to claim 1, wherein said input hybrid network further comprises:

a complex multiplier for adjusting the amplitude and phase of the digital quadrature baseband signal.

8. (Cancelled).

9. (Currently Amended) ~~The multiport amplifying apparatus according to claim 1,~~ A multiport amplifying apparatus comprising:

an input hybrid network having a plurality of input ports;

a plurality of amplifiers connected to the output of said input hybrid network; and

an output hybrid network connected to the outputs of said amplifiers and having a plurality of output ports,

wherein said input hybrid network receives digital quadrature baseband signals from said plurality of input ports, and evenly distributes the input digital quadrature baseband signals to said plurality of amplifiers,

said multiport amplifying apparatus further comprising a baseband combiner disposed in front of said input hybrid network for combining a plurality of the digital quadrature baseband signals.